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Sent: Wed 10/17/2012 8:19:28 PM
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Daily News

Regulators Seek TCE Remedies At EPA's Risk Level, Heightening Concerns

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Regulators and responsible parties are taking action at sites contaminated with trichloroethylene (TCE) in indoor air at levels at or near EPA's risk values, heightening concerns from industry and other critics who say it is inappropriate because the risk values do not allow for consideration of site-specific factors that could attenuate chemical hazards.

Risk managers are interpreting EPA risk values as a bright line cutoff, rather than as a more general or "imprecise" risk value, one source says.

Others note the agency has not yet issued guidance for how to translate its recent TCE risk value into cleanup and other actions levels. And the agency has also suggested that the risk value should only serve as a screening threshold to determine if additional testing and site-specific assessment is necessary.

At two sites -- one in Ohio and one in Missouri -- officials recently have taken action to address indoor air contamination at or near EPA's reference concentration (RfC), the amount of the substance EPA anticipates can be inhaled daily over a lifetime without causing adverse health effects, of 2 micrograms per cubic meter, (ug/m3).

EPA set the RfC in its Integrated Risk Information System (IRIS) assessment, released last year, but since its release it has been the source of some controversy as some industry officials say it is overly conservative, is inappropriate to use -- as EPA is proposing at a California site -- to set protection levels for acute exposures and the agency has not yet issued guidance for how to use it to protect against chronic exposures.

But even before EPA issues guidance, regulators and others are using the level as a threshold for action. At the Ohio site, the state Department of Transportation (ODOT) voluntarily offered to buy out home owners near Newark, OH, facing toxic indoor air vapors of TCE stemming from a nearby former asphalt and metals degreasing facility. State regulators had urged ODOT to conduct screenings at the homes because concentrations in two of them was estimated at or in excess of 2 ug/m3 but transportation officials chose the additional action of offering to buy houses to tear them down to prevent any risk of vapor intrusion.

In an email, an Ohio EPA spokesman says long-term exposures to contamination levels at or near 2 ug/m3 "could indicate some level of concern."

And in Elmwood Park, MO, EPA Region VII and the Missouri Department of Natural Resources (MDNR) are requiring a responsible party to install vapor mitigation systems in five residences where indoor air contamination is above an action level of 2.1 ug/m3.

The level used to require mitigation is site-specific, and consistent with regional and national models, according to an email from a Region VII spokesman.

In another case, Region III officials last summer cited the IRIS assessment as one factor for proposing government funded mitigation to prevent vapor intrusion in several homes above TCE-contaminated

groundwater at the Crossley Farm Superfund site in Berks County, PA. Mitigation was installed at several other homes at the site years before the IRIS assessment. A proposed plan says 10 homes at the site have TCE in indoor air with samples ranging from 0.43 ug/m³ to 53 ug/m³.

Insufficient Guidance

One former state regulator says the IRIS assessment for TCE did not provide sufficient guidance to help regulators assess sites using the RfC, a new non-cancer risk level that is more strict than the cancer risk level, which typically drives risk assessments and offers regulators more flexibility.

"These states are all trying to figure out how to close sites and transact properties," the source said, suggesting EPA has not provided sufficient guidance.

During an Oct. 11 conference call hosted by an Alliance for Risk Assessment (ARA) panel that is working to provide guidance on how states should implement the TCE IRIS assessment, one panelist said IRIS risk values are not intended as action levels. "A reference dose is not a bright line," the panelist said, describing an issue the group plans to explore further. "We need to help people understand that."

A state regulator, who works in a western state, says the RfC is sufficiently conservative that regulators and consultants will not be able to distinguish whether TCE found in indoor air at that level is caused by vapor intrusion or background sources, such as gun cleaner or other household items.

"Use of the noncancer screening level will lead to even more legal and financial problems for property owners, if the EPA and/or state regulators try to use the screening level as a bright line," the regulator said in an email to Inside EPA.

The western state regulator says states need better information on what the actual health risks are from TCE at the RfC level and also at 100 times the RfC level. "Do I really need to worry about 0.5 ug/m³? How about 50 ug/m³?" the source asked. "When do I absolutely have a problem?"

While critics say more information is needed to inform decisions on vapor intrusion from TCE, a lawyer who advises clients in negotiations with EPA says the two cases show the recent IRIS assessment has already brought a level of certainty to the market, so regulators and responsible parties are moving more decisively to reduce their liability and protect public health.

An environmentalist, who follows vapor intrusion issues, says regulators' assertion that IRIS information is only one factor driving decision-making at contaminated sites makes sense because the change from past TCE standards is less than the variability, researchers now realize is inherent in indoor air samples, even within a single building.

"The new TCE numbers don't create new sites," the environmentalist says. "They may affect which homes get mitigated."

Both the environmentalist and the lawyer say the Missouri and Ohio cases show vapor intrusion is drawing increased attention, and that regulators will likely take second looks at more sites in the near future, especially after EPA releases its long-awaited vapor intrusion guidance, once scheduled for release on Nov. 30, though EPA officials have recently backed off that deadline.

Indoor Air Testing

In Ohio, the ODOT source says the agency chose to take the added step of buying homes because testing for indoor air contamination lowers property values. On Sept. 12 ODOT officials met with residents to discuss vapor intrusion risk from TCE, and said the problem arose after Ohio EPA started making sampling recommendations based on new environmental standards from the federal EPA, which meant estimated TCE levels are now considered high, according to an ODOT presentation.

The ODOT source says the agency would like homeowners to agree to sell their houses, but also would consider using eminent domain, adding that since the early 1990s, ODOT has spent between \$10 million and \$12 million to clean up the contamination, though the problem persists.

"Now that the threshold levels of exposure have changed we want to make sure that there is not a health issue for people currently living in the residences," the ODOT source said.

In Missouri, meanwhile, where 10 homes are being tested, the TCE vapors stem from underground contamination suspected to have come from a metals processing facility in the 1980s, which was located in a commercial area near houses and apartments. In Missouri, where MDNR required mitigation for levels above 2.1 ug/m³ under a work agreement with the responsible party, EPA officials are now working to better assess additional vapor intrusion risk in the area, an effort which will lead to a new work plan in the coming months, the Region VII source says.

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